COMMUNICATIONS ARCHITECTURE FOR
MEMORY-BASED DEVICES

ABSTRACT OF THE DISCLOSURE

A serial communications architecture for communicating between hosts and data store devices. The Storage Link architecture is specially adapted to support communications between multiple hosts and storage devices via a switching network, such as a storage area network. The Storage Link architecture specifies various communications techniques that can be combined to reduce the overall cost and increase the overall performance of communications. The Storage Link architecture may provide packet ordering based on packet type, dynamic segmentation of packets, asymmetric packet ordering, packet nesting, variable-sized packet headers, and use of out-of-band symbols to transmit control information as described below in more detail. The Storage Link architecture may also specify encoding techniques to optimize transitions and to ensure DC-balance.